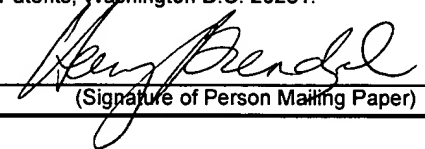


A

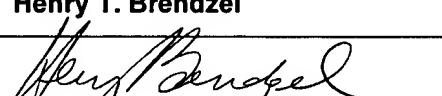
<b>UTILITY PATENT APPLICATION TRANSMITTAL</b> <small>for new non-provisional applications under 37 CFR 1.53(b)</small>		Attorney Docket No. <b>Calderbank 19-6-42</b>	
		First Named Inventor or Application Identifier <b>A. R. Calderbank</b>	
		Title <b>Combined Channel Coding and Space-Block Coding In a Multi-Antenna Arrangement</b>	
		Express Mail Label no. <b>EJ159362696US</b>	
To: <b>Assistant Commissioner for Patents Box Patent Application Washington D.C. 20231</b>			
APPLICATION ELEMENTS		ACCOMPANYING APPLICATION PARTS	
<input checked="" type="checkbox"/> Fee Transmittal Form (original and duplicate) <input checked="" type="checkbox"/> Specification <b>Total Pages 19</b> title cross reference to related applications (e.g. provisional application) background summary brief description of the drawings (if filed) detailed description claims abstract <input checked="" type="checkbox"/> Drawing(s) <b>Total Pages 2</b> <input checked="" type="checkbox"/> Declaration <b>Total Pages 3</b> a. <input type="checkbox"/> Newly executed b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuations/divisionals with section below filled out) <input type="checkbox"/> Deletion of Inventor(s) Signed Statement attached deleting inventor(s) named in the prior application. 37 CFR 163 (d)(2) and 1.33(b). <input type="checkbox"/> Incorporation by reference (usable if Declaration is a copy): The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied, is considered as being part of the disclosure of the accompanying application is hereby incorporated by reference herein. <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Assignment <input checked="" type="checkbox"/> Recordation form <input checked="" type="checkbox"/> Power of Attorney <input checked="" type="checkbox"/> Postcard <input type="checkbox"/> Small entity statement <input type="checkbox"/> Certified copy of priority documents <input type="checkbox"/> Information disclosure statement <input type="checkbox"/> Copies of IDS citations <input type="checkbox"/> 37 CFR 3.73(b) Statement <input checked="" type="checkbox"/> check <input type="checkbox"/> Other	
If a CONTINUING APPLICATION, check appropriate box and supply the requisite information: <input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP) of prior Application No:			
CORRESPONDENCE ADDRESS			
<input type="checkbox"/> Customer Number or Bar Code Label		(insert Customer No. or Attach bar code label here)	
		<input checked="" type="checkbox"/> Correspondence Address below	
NAME <b>Samuel H. Dworetzky</b>			
ADDRESS <b>AT&amp;T Corp.; P.O. Box 636 Middletown; NJ; 07748-4801</b>			
COUNTRY <b>United States</b>		FAX <b>(732) 957-5505</b>	
SIGNATURE OF APPLICANT ATTORNEY, OR AGENT			
Name <b>Henry T. Brendzel</b>		Reg. No. <b>26,844</b>	
Telephone <b>(973) 467-2025</b>			
Signature		Date	

I hereby certify that this Application is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington D.C. 20231.

4/28/99  
Date of DepositHenry Brendzel  
(Printed Name of Person Mailing Paper)  
(Signature of Person Mailing Paper)

<b>FEE TRANSMITTAL</b> <i>Patent Fees are subject to annual revisions on October 1.          These are the fees effective November 10, 1998          Small entity payments must be supported by a small entity statement,          Otherwise, large entity fees must be paid. See Forms PTO/SB/09-12.</i>		<i>Complete if Known</i>		
		Application Number		
		Filing Date		
		First Named Inventor	A. R. Calderbank	
		Examiner Name		
		Group/Art Unit		
TOTAL AMOUNT OF PAYMENT	(\$)	800	Attorney Docket ID	Calderbank 19-6-42

<b>METHOD OF PAYMENT (check one)</b> 1. The Commissioner is hereby authorized to charge indicated fees and other underpayments, and credit overpayments to: Deposit Account Number      Deposit Account Name <b>500732</b> <b>Henry T. Brendzel</b> <input checked="" type="checkbox"/> Charge any additional Fee Required under 37 CFR 1.16 and 1.17 <input type="checkbox"/> Charge the Issue Fee Set in 37 CFR 1.18 at the Mailing of the Notice of Allowance 2. <input checked="" type="checkbox"/> Payment enclosed: <input checked="" type="checkbox"/> Check <input type="checkbox"/> Money Order <input type="checkbox"/> Other		<b>FEE CALCULATION (continued)</b> <b>3. ADDITIONAL FEES</b> <table border="1"> <thead> <tr> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>Non-English specification</td><td></td></tr> <tr><td>For filing request for reexamination</td><td></td></tr> <tr><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>Extension for reply within the first month</td><td></td></tr> <tr><td>Extension for reply within the second month</td><td></td></tr> <tr><td>Extension for reply within the third month</td><td></td></tr> <tr><td>Extension for reply within the fourth month</td><td></td></tr> <tr><td>Extension for reply within the fifth month</td><td></td></tr> <tr><td>Notice of Appeal</td><td></td></tr> <tr><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>Requesting an oral hearing</td><td></td></tr> <tr><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>Petition to revive - unavoidable</td><td></td></tr> <tr><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>Utility issue fee (or reissue)</td><td></td></tr> <tr><td>Design issue fee</td><td></td></tr> <tr><td>Plant issue fee</td><td></td></tr> <tr><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>Submission of Information Disclosure Statement</td><td></td></tr> <tr><td>Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> <tr><td>Other fee</td><td></td></tr> <tr><td>Other fee</td><td></td></tr> <tr><td>Other fee</td><td></td></tr> <tr> <td><b>SUBTOTAL (2) (\$)</b></td> <td><b>40</b></td> </tr> </tbody> </table>		Fee Description	Fee Paid	Surcharge - late filing fee or oath		Surcharge - late provisional filing fee or cover sheet		Non-English specification		For filing request for reexamination		Requesting publication of SIR prior to Examiner action		Requesting publication of SIR after Examiner action		Extension for reply within the first month		Extension for reply within the second month		Extension for reply within the third month		Extension for reply within the fourth month		Extension for reply within the fifth month		Notice of Appeal		Filing a brief in support of an appeal		Requesting an oral hearing		Petition to institute a public use proceeding		Petition to revive - unavoidable		Petition to revive - unintentional		Utility issue fee (or reissue)		Design issue fee		Plant issue fee		Petitions to the Commissioner		Petitions related to provisional applications		Submission of Information Disclosure Statement		Recording each patent assignment per property (times number of properties)		Filing a submission after final rejection (37 CFR 1.129(a))		For each additional invention to be examined (37 CFR 1.129(b))		Other fee		Other fee		Other fee		<b>SUBTOTAL (2) (\$)</b>	<b>40</b>
Fee Description	Fee Paid																																																																
Surcharge - late filing fee or oath																																																																	
Surcharge - late provisional filing fee or cover sheet																																																																	
Non-English specification																																																																	
For filing request for reexamination																																																																	
Requesting publication of SIR prior to Examiner action																																																																	
Requesting publication of SIR after Examiner action																																																																	
Extension for reply within the first month																																																																	
Extension for reply within the second month																																																																	
Extension for reply within the third month																																																																	
Extension for reply within the fourth month																																																																	
Extension for reply within the fifth month																																																																	
Notice of Appeal																																																																	
Filing a brief in support of an appeal																																																																	
Requesting an oral hearing																																																																	
Petition to institute a public use proceeding																																																																	
Petition to revive - unavoidable																																																																	
Petition to revive - unintentional																																																																	
Utility issue fee (or reissue)																																																																	
Design issue fee																																																																	
Plant issue fee																																																																	
Petitions to the Commissioner																																																																	
Petitions related to provisional applications																																																																	
Submission of Information Disclosure Statement																																																																	
Recording each patent assignment per property (times number of properties)																																																																	
Filing a submission after final rejection (37 CFR 1.129(a))																																																																	
For each additional invention to be examined (37 CFR 1.129(b))																																																																	
Other fee																																																																	
Other fee																																																																	
Other fee																																																																	
<b>SUBTOTAL (2) (\$)</b>	<b>40</b>																																																																
<b>FEE CALCULATION</b> <b>1. FILING FEE</b> <table border="1"> <thead> <tr> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>Utility Filing Fee</td><td>760</td></tr> <tr><td>Design Filing Fee</td><td></td></tr> <tr><td>Plant Filing Fee</td><td></td></tr> <tr><td>Reissue Filing Fee</td><td></td></tr> <tr><td>Provisional Filing Fee</td><td></td></tr> <tr> <td><b>SUBTOTAL (1) (\$)</b></td> <td><b>760</b></td> </tr> </tbody> </table>		Fee Description	Fee Paid	Utility Filing Fee	760	Design Filing Fee		Plant Filing Fee		Reissue Filing Fee		Provisional Filing Fee		<b>SUBTOTAL (1) (\$)</b>	<b>760</b>																																																		
Fee Description	Fee Paid																																																																
Utility Filing Fee	760																																																																
Design Filing Fee																																																																	
Plant Filing Fee																																																																	
Reissue Filing Fee																																																																	
Provisional Filing Fee																																																																	
<b>SUBTOTAL (1) (\$)</b>	<b>760</b>																																																																
<b>2. CLAIMS</b> <table border="1"> <thead> <tr> <th></th> <th>Claims remaining</th> <th>Highest Paid</th> <th>Extra</th> <th>Rate</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Total Claims</td> <td>14</td> <td>20</td> <td>0</td> <td>18</td> <td>0</td> </tr> <tr> <td>Independent Claims</td> <td>2</td> <td>3</td> <td>0</td> <td>78</td> <td>0</td> </tr> <tr> <td>Multiply Dependent Claims</td> <td></td> <td></td> <td><input type="checkbox"/></td> <td>260</td> <td>0</td> </tr> <tr> <td><b>SUBTOTAL (2) (\$)</b></td> <td></td> <td></td> <td></td> <td></td> <td><b>0</b></td> </tr> </tbody> </table>			Claims remaining	Highest Paid	Extra	Rate	Amount	Total Claims	14	20	0	18	0	Independent Claims	2	3	0	78	0	Multiply Dependent Claims			<input type="checkbox"/>	260	0	<b>SUBTOTAL (2) (\$)</b>					<b>0</b>																																		
	Claims remaining	Highest Paid	Extra	Rate	Amount																																																												
Total Claims	14	20	0	18	0																																																												
Independent Claims	2	3	0	78	0																																																												
Multiply Dependent Claims			<input type="checkbox"/>	260	0																																																												
<b>SUBTOTAL (2) (\$)</b>					<b>0</b>																																																												

<b>SUBMITTED BY</b>				<b>Complete (if applicable)</b>	
Typed of Printed Name	Henry T. Brendzel			Reg. Number	26,844
Signature				Date	4/28/99
				Deposit Account User ID	